

CLAIMS

What is claimed is:

1. A targeting system for adapting a device to a user, comprising:

at least one communications device in communication with at least one network;

a virtual database accessible to at least one of said at least one communications device over the at least one network, wherein said virtual database comprises:

at least one actual user characteristic accepted over the at least one network; and

a heuristic modeler that generates at least one heuristic user characteristic in accordance with the at least one actual user characteristic; and

a searcher that provides content to said at least one of said at least one communications device over the at least one network, in accordance with said virtual database.

2. The targeting system of claim 1, wherein the at least one network comprises at least one selected from the group consisting of an internet, an intranet, a direct dial-in network, and a wireless network.

3. The targeting system of claim 1, wherein at least one of said at least one communications device comprises a wireless communications device.

4. The targeting system of claim 3, wherein said wireless communication device comprises at least one selected from the group consisting of a cellular telephone, a programmable digital assistant, a short range wireless device, a laptop having a modem, and a web-enabled wireless device.

5. The targeting system of claim 1, wherein at least one of said at least one communications device comprises at least one selected from the group consisting of a computer and a television.

6. The targeting system of claim 1, further comprising at least one monitor, wherein said at least one monitor monitors at least one of said at least one communications device, wherein said monitor is communicatively connected to said virtual database, and wherein at least one actual user characteristic is varied in accordance with at least one output of said at least one monitor.

7. The targeting system of claim 6, wherein said at least one monitor comprises at least one selected from the group consisting of a time monitor and a location monitor.

8. The targeting system of claim 6, wherein said monitor provides at least one actual characteristic comprising at least one selected from the group consisting of time of activity information, and position of activity information, current time information, current position information, and behavioral pattern information.

9. The targeting system of claim 6, wherein at least two of the at least one actual user characteristic are batched prior to acceptance over the at least one network by said virtual database.

10. The targeting system of claim 6, wherein said at least one monitor records at least one selected from the group consisting of activity on a television, on a telephone monitor, on the at least one network, and on a purchasing point.

11. The targeting system of claim 6, wherein said at least one monitor comprises at least one selected from the group

consisting of a database, at least one storage memory, and at least one batching memory.

12. The targeting system of claim 1, wherein the at least one actual user characteristic is accepted from the user.

13. The targeting system of claim 12, comprising at least two of the at least one actual user characteristic, wherein the at least two actual user characteristics comprise at least one user profile accepted from the user over the at least one network by said virtual database.

14. The targeting system of claim 12, further comprising an access restrictor that restricts access to the at least one user profile.

15. The targeting system of claim 1, wherein said virtual database is two-way accessible to said at least one of said at least one communications device over the at least one network.

16. The targeting system of claim 1, wherein said virtual database comprises at least one memory, at least one processor, at least one database, and at least one comparator.

17. The targeting system of claim 1, wherein said virtual database comprises a real-time cache, and wherein at least one of the at least one actual user characteristic is real-time cached in the real-time cache.

18. The targeting system of claim 1, wherein said virtual database comprises at least one inquiry generator, wherein at least one of the at least one actual user characteristic is generated responsively to a response by the user to an inquiry from the at least one inquiry generator.

19. The targeting system of claim 18, wherein the response is permanently stored within said virtual database.

20. The targeting system of claim 18, wherein the response is temporarily stored to form, in conjunction with the at least one heuristic user characteristic, an overall model of the user within said virtual database.

21. The targeting system of claim 18, wherein the inquiry generator comprises a monitor for monitoring at least one of said at least one communications device, and wherein the response by the user comprises an activity monitored by the monitor.

22. The targeting system of claim 1, wherein the heuristic modeler comprises at least two interrelated relational database.

23. The targeting system of claim 1, wherein said virtual database comprises:

at least one network interface to the at least one network;

a plurality of device interfaces to a plurality of communications devices;

a searcher interface to said searcher;

a storage database comprising the at least one actual user characteristic and the at least one heuristic user characteristic; and

a controller communicatively connected to the at least one network interface, the plurality of device interfaces, the searcher interface, and the storage database.

24. The targeting system of claim 23, wherein the controller controls information passing to the storage database.

25. The targeting system of claim 24, wherein the controller comprises at least one selected from the group consisting of a DSP, a comparator, and a bus controller.

26. The targeting system of claim 24, wherein the controller passes the information to the storage database by at least one selected from the group consisting of text, voice over-IP, and data streaming.

27. The targeting system of claim 1, wherein the at least one actual user characteristic comprises a search request from the user for said searcher.

28. The targeting system of claim 1, wherein said virtual database weights the at least one actual user characteristic and the at least one heuristic user characteristic.

29. The targeting system of claim 28, wherein the at least one actual user characteristic is weighted 80%, and wherein the at least one heuristic user characteristic is weighted 20%.

30. The targeting system of claim 1, wherein the heuristic modeler comprises a plurality of predictive rules in accordance with general behavioral patterns of persons other than the user.

31. The targeting system of claim 30, wherein the general behavioral patterns are directly entered to the heuristic modeler.

32. The targeting system of claim 30, wherein the general behavioral patterns are monitored by the heuristic modeler.

33. The targeting system of claim 30, wherein said virtual database instructs said searcher in accordance with a statistical probability output of the heuristic modeler, in accordance with a comparison of the at least one actual user characteristic and the predictive rules.

34. The targeting system of claim 33, wherein the statistical probability analysis is updated in accordance with a user behavior responsive to the content provided to the user by the searcher.

35. The targeting system of claim 23, wherein said virtual database further comprises an input mode selector.

36. The targeting system of claim 35, wherein the input mode selector is controllable by the user.

37. The targeting system of claim 35, wherein the input mode selector comprises a data input mode.

38. The targeting system of claim 35, wherein the input mode selector comprises a message request mode.

39. The targeting system of claim 35, wherein the input mode selector comprises a search mode.

40. The targeting system of claim 39, wherein the search mode is an automated search mode generated in accordance with the heuristic modeler.

41. The targeting system of claim 1, further comprising a vendor data access in communication with said virtual database.

42. The targeting system of claim 41, wherein said vendor data access comprises a plurality of messages entered by a plurality of vendors.

43. The targeting system of claim 42, wherein said vendor data access is in communication with said searcher, and wherein the content comprises at least one of the plurality of messages.

44. The targeting system of claim 43, wherein said vendor data access comprises at least one selected from the group consisting of a relational database and a hyperlink.

45. The targeting system of claim 43, wherein the content comprises at least two of the plurality of messages, and wherein the at least two messages are prioritized.

46. The targeting system of claim 45, wherein the at least two messages are prioritized in accordance with a fee paid by at least two of the vendors.

47. The targeting system of claim 45, wherein the at least two messages are prioritized in accordance with a probability of success of each of the at least two messages, according to the at least one heuristic user characteristic.

48. The targeting system of claim 43, wherein said vendor data access further comprises at least one of the at least one actual user characteristic and the at least one heuristic user characteristic, and wherein said searcher selects the content in accordance with the at least one of the at least one actual user characteristic and the at least one heuristic user characteristic in said vendor data access.

49. The targeting system of claim 1, wherein said searcher comprises a filter that identifies the content as relevant to at least one of said virtual database and said vendor data access.

50. The targeting system of claim 49, wherein the filter tailors the content to the user in accordance with said virtual database.

51. The targeting system of claim 49, wherein the filter comprises an internet interface, and wherein the internet interface accesses internet information responsive to said virtual database, and wherein the content comprises the accessed internet information.

52. The targeting system of claim 1, further comprising at least one user response monitor, wherein said at least one user response monitor updates said virtual database in accordance with a response of the user to the contents.

53. A system for providing a personalized targeted message to a user, comprising:

a communications device operated by the user;

a virtual database comprising at least one characteristic about said user;

a searcher having access to a plurality of targeted messages and to said virtual database, wherein said searcher filters at least one of the targeted messages that is of interest to the user according to at least one of the at least one characteristics; and

wherein said searcher communicates the at least one targeted message of interest to said communications device for provision to the user.

54. The system of claim 53, wherein said communications device comprises a wireless communications device.

55. The system of claim 54, wherein said wireless communications device is selected from the group consisting of a wireless telephone, a web-enabled programmable digital assistant, and a web-enabled personal computer.

56. The system of claim 53, wherein said virtual database comprises an overall model, wherein said overall model includes the at least one characteristic, and wherein at least one of the at least one characteristic is heuristically predicted.

57. The system of claim 56, wherein the at least one targeted message comprises at least one vendor advertisement, and wherein the at least one characteristic comprises at least one heuristically predicted characteristic and at least one actual characteristic, and wherein the interest assessed according to the at least one characteristic comprises an interest in purchasing from the at least one vendor advertisement.

58. An adaptive wireless communication device network, comprising:

- a wireless communication device;

- at least one first database comprising actual information entered by a user of the wireless device;

- at least one second database comprising monitored information of behavior by the user of the wireless device;

- at least one heuristic database comprising heuristically estimated information on user behavior, wherein the heuristically estimated information is estimated in accordance with said at least one first database and said at least one second database;

- a searcher that performs a search in accordance with at least one of said at least one first database, said at least

one second database, and said at least one heuristic database, and that returns a result of the search to said wireless device.

59. A method of targeting content to a user of a communications device, comprising:

building a virtual database of information regarding the user;

modeling at least one probabilistic behavior of the user, in accordance with the virtual database;

searching for content targeted to the at least one modeled probabilistic behavior; and

providing the content to the communications device.

60. The method of claim 59, wherein the communications device comprises a wireless communications device.

61. The method of claim 59, wherein said building comprises monitoring a plurality of information input by the user.

62. The method of claim 59, wherein said building comprises monitoring of transactions engaged in by the user.

63. The method of claim 62, wherein said monitoring comprises monitoring for positive responses by the user to the content provided.

64. The method of claim 61, 62, or 63, further comprising updating the virtual database in accordance with said monitoring.

65. The method of claim 59, wherein said building comprises monitoring a time and a location of the user.

66. The method of claim 59, wherein said building comprises batching the information, and accepting the information subsequent to said batching.

67. The method of claim 59, wherein said building comprises caching the information prior to said modeling.

68. The method of claim 67, wherein said caching comprises caching until said modeling, and deleting upon said modeling.

69. The method of claim 59, further comprising restricting access to the virtual database.

70. The method of claim 59, wherein said modeling comprises comparing the virtual database with general behavioral information.

71. The method of claim 59, further comprising accepting a search request from the user, wherein said searching is further in accordance with the search request.

72. The method of claim 59, further comprising accepting a heuristic search request in accordance with said modeling, wherein said searching is further in accordance with the heuristic search request.

73. The method of claim 72, further comprising limiting said providing of the content to content having a minimum modeled probability.

74. The method of claim 59, wherein said modeling comprises weighting actual data in the virtual database, monitored data in the virtual database in the virtual database, and heuristic data in the virtual database.

75. The method of claim 59, further comprising:
receiving at least one vendor instruction; and

targeting the content in accordance with the at least one received vendor instruction.

76. The method of claim 59, further comprising prioritizing the content in accordance with said modeling.

77. The method of claim 59, wherein said providing comprises tailoring the content to the user in accordance with the virtual database.

78. The method of claim 59, wherein said providing comprises tailoring the content to the communications device in accordance with the virtual database.

79. The method of claim 59, wherein said modeling comprises assessing transactional habit and personal preference data.

80. The method of claim 59, further comprising receiving feedback on the success of the content with the user, and updating said modeling in accordance with the feedback.

81. An adaptive message targeting system, comprising:

means for accepting a virtual database of information regarding the user;

means for modeling at least one probabilistic behavior of the user, in accordance with the virtual database;

means for searching for content targeted to the at least one modeled probabilistic behavior; and

means for providing the content to the communications device.

82. The targeting system of claim 81, wherein the communications device comprises a wireless communications device.

83. The targeting system of claim 81, wherein said means for accepting comprises means for monitoring a plurality of information input by the user.

84. The targeting system of claim 81, wherein said means for accepting comprises means for monitoring of transactions engaged in by the user.

85. The targeting system of claim 84, wherein said means for monitoring comprises means for monitoring for positive responses by the user to the content provided.

86. The targeting system of claim 81, wherein said means for accepting comprises means for monitoring a time and a location of the user.

87. The targeting system of claim 81, wherein said means for accepting comprises a real-time cache for the information.

88. The targeting system of claim 81, wherein said means for modeling comprises a database including general behavioral information.

89. The targeting system of claim 81, further comprising:
means for targeting the content in accordance with at least one vendor instruction.

90. The targeting system of claim 81, further comprising means for prioritizing the content in accordance with said means for modeling.

91. A virtual database for use in targeting messages to at least one user of a communications device, comprising:
at least one network interface to at least one network;

a plurality of device interfaces to at least one of the communications devices;

a searching interface;

a storage database comprising at least one actual user characteristic of the at least one user and the at least one heuristic user characteristic of the at least one user; and

a controller communicatively connected to the at least one network interface, the plurality of device interfaces, the searching interface, and the storage database;

wherein said controller generates the at least one heuristic user characteristic in accordance with the at least one actual user characteristic, and wherein said controller generates a search for the searching interface in accordance with at least one of the at least one heuristic user characteristic, the at least one actual user characteristic, a monitoring of the at least one network interface, and a monitoring of at least one of the plurality of device interfaces.

92. The virtual database of claim 91, wherein the controller controls information passing to the storage database from at least one of the at least one network interface, the plurality of device interfaces, the searching interface, and the storage database.

93. The virtual database of claim 92, wherein the controller comprises at least one selected from the group consisting of a DSP, a comparator, and a bus controller.

94. The virtual database of claim 92, wherein the controller passes the information to the storage database by at least one selected from the group consisting of text, voice over-IP, and data streaming.

95. The virtual database of claim 91, wherein the at least one actual user characteristic comprises a search request from the user to be performed by said searching interface.

96. The virtual database of claim 91, wherein the at least one heuristic user characteristic comprises a search request from the controller to be performed by said searching interface.

97. The virtual database of claim 91, wherein said controller instructs said searching interface in accordance with a statistical probability output of the at least one heuristic user characteristic, in accordance with a comparison to the at least one actual user characteristic.

98. The virtual database of claim 97, wherein the statistical probability output is updated in accordance with a user behavior responsive to content provided to the user by the searching interface.

99. The virtual database of claim 91, wherein said plurality of device interfaces comprises device monitoring interfaces that monitor user behavior on at least two of the communications devices.

100. The virtual database of claim 99, wherein the user behavior is monitored for a television.

101. The virtual database of claim 99, wherein the user behavior is monitored for a computer.

102. The virtual database of claim 99, wherein the user behavior is monitored for a wireless telephone.

103. A searcher for use in targeting messages to at least one user of a wireless communications device, comprising:

a first data bank of user characteristics, wherein said first data bank includes at least one user characteristic entered by the user, and at least one user characteristic

monitored by a device monitor monitoring the wireless communications device;

a comparator communicatively connected to said first data bank;

a second data bank of objective characteristics communicatively connected to said comparator, wherein the objective characteristics are compared to the user characteristics by said comparator for a probabilistic message target;

an available content data bank including available content;

a content filter communicatively connected to said comparator and to said available content data bank, wherein the content filter accesses the available content, and filters the available content in accordance with the probabilistic message target output from said comparator;

wherein the filtered available content is displayed to the user on the wireless communications device.

104. The searcher of claim 103, wherein the said available content data bank comprises network content.

105. The searcher of claim 104, wherein the network content comprises internet content.